



FIELD LABS IN CHICONTEPEC

The five field labs that were established in 2010 comprise the Coyotes, Agua Fría, Corralillo, Presidente Alemán, and Remolino fields.

1. Coyotes Field

Operator: *Tecpetrol*

2. Agua Fría Field

Operator: *Schlumberger*

3. Corralillo Field

Operator: *Baker Hughes*

4. Presidente Alemán Field

Operator: *Weatherford*

5. Remolino Field

Operator: *Halliburton*

FIELD LAB STRATEGY

In 2010, five different field laboratories were awarded to experienced companies in production-enhancement solutions, in order to test new technologies for eventual implementation in the Chicontepec project. “We have been working with several top-notch service companies at five different field labs,” explains Gustavo Hernández,

Subdirector of Planning and Evaluation for Pemex E&P. “Each field lab has had different degrees of success, since different technologies are being used at each one: multi-frack, water injection, horizontal wells, and combinations have been used accordingly by each of the five different companies that were assigned to work in the labs.”

1 COYOTES

The Coyotes field was awarded to Tecpetrol, a subsidiary of the Techint Group that is in charge of executing exploration and production activities for oil and gas fields in Argentina, Bolivia, Colombia, Ecuador, Mexico, Peru, Venezuela, and the United States. In Coyotes, Tecpetrol executed surveys, drilling, and well repairs, as well as field operation and maintenance, managing to increase average production from 1,178 b/d in 2009 to 2,591 b/d in 2012.

2 AGUA FRÍA

The field lab in the Agua Fría field was assigned to Schlumberger, one of the world's leading oilfield services companies. The company's objectives include the application of water injection techniques and the PowerSTIM methodology, which has proved successful in Burgos projects. Through stimulation-treatment design using this methodology, production within the field increased slightly from an average 5,325 b/d in 2010 to an average of 5,627 b/d, while also reducing drilling times from 24 to five days and lowering costs of production.

3 CORRALILLO

Drilling expert Baker Hughes was the company assigned to work in the Corralillo field lab. Through close collaboration with Pemex, the company managed to increase average production from 2,665 b/d in 2009 to 12,315 b/d in 2012. This production boost was driven specifically by Baker Hughes' focus on understanding each different reservoir's geological conditions to outline a specific plan with tailored technologies according to the analyzed characteristics. Specific well evaluation and analysis, as well as proper technology selection, was key in achieving success in Corralillo, according to Luis Moncada, Vice President of Baker Hughes' Mexico Geomarket.

4 PRESIDENTE ALEMÁN

Weatherford, one of the largest oilfield service companies, was assigned to work on the Presidente Alemán field with Halliburton, one of the world's largest providers of products and services to the energy industry. Through 2D/3D seismic and log interpretation, static geomodel development, reservoir modeling, production stimulation techniques and engineering, and well planning and drilling, both companies managed to increase production from an 836 b/d average in 2009 to an 8,762 b/d in 2012.

5 REMOLINO

The Remolino field was awarded to Halliburton. Through several horizontal drilling techniques and other well-completion solutions, they managed to raise average production from 400 b/d in 2009 to 4,729 b/d in 2012.